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EXAMINER
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STEELE, JENNIFER A

ART UNIT	PAPER NUMBER
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1798

NOTIFICATION DATE	DELIVERY MODE
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10/15/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/540,474	<b>Applicant(s)</b> MATSUI ET AL.	
	<b>Examiner</b> JENNIFER STEELE	<b>Art Unit</b> 1798	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-8 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-8 and 10-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                     |                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                         | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 10 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 10 is dependent on claim 1 and Applicant amended claim 1 to recite the orientation index of the second resin is 16% or less. Applicant noted support for the limitation is found in Example 5 of the specification. However, example 5 indicates that the spinning speed is 1360 m/min. Claim 10 requires the spinning speed to be 2000 m/min or higher. While there is support for a 16% orientation index of the second resin, there is no support for a 16% orientation index and at a spinning speed of 2000 m/min or greater.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2. Claim 1, 4, 6, 7, 8 and 11-13 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kajita (JP-2003-119625 – machine translation) as further evidenced by J. Karger-Kocsis, Institute for Composite Materials “Polypropylene An A-Z reference”.** Claims 1 and 7 as amended are described in the table below. As the claims were amended to change the orientation index of the second resin component from 25% or lower to 16% or lower and added new claims 12 and 13, the previous rejection is maintained, revised and presented as follows.

<b>Claim 1</b>	<b>Claim 7</b>
<b>a.</b> heat fusible conjugate fiber produced by	heat fusible conjugate fibers
<b>b.</b>	comprising two components having different melting points
<b>c.</b>	formed by heating fusible conjugate fibers and fusing the intersections of the fibers and
<b>d.</b>	wherein the bulky nonwoven fabric has having a specific volume of 95 cm <sup>3</sup> /g or more
<b>e.</b>	a strength per basis weight of 0.18(N/25 mm)/(g/m <sup>2</sup> ) or higher,
<b>f.</b>	a bulk softness per unit thickness of 0.14

	N/mm or less
<b>g.</b> High speed melt spinning and after the spinning	by high-speed melt spinning, after spinning
<b>h.</b> a crimp treatment	a crimp treatment
<b>i.</b> But no drawing	But no drawing
<b>j.</b> which comprises a first resin component having an orientation index of 40% or higher	comprise a first resin component having an orientation index of 40% or higher
<b>k.</b> a second resin component having a lower melting or softening point than the melting point of the first resin component and an orientation index of <u>16%</u> or lower,	a second resin component having a lower melting or softening point than the melting point of the first resin component and an orientation index of <u>16%</u> or lower,
<b>l.</b> the second resin component being present on at least part of the surface of the fiber in a lengthwise continuous configuration,	the second resin component being present on at least part of the surface of the fiber in a lengthwise continuous configuration,
<b>m.</b> wherein said fiber has negative heat shrinkage values at a temperature higher than the melting point or softening point of the second resin component by 10°C,	wherein said fibers have negative heat shrinkage values at a temperature higher than the melting point or softening point of the second resin component by 10°C,
<b>n.</b> increases in length upon heating	increase in length upon heating,
<b>o.</b> wherein the heat fusible conjugate fibers are staple fibers of 30-70 mm in length	wherein the heat fusible conjugate fibers are staple fibers of 30 to 70 mm in length.

Kajita teaches a fiber for a nonwoven fabric in the form of an undrawn state of a sheath/core type conjugate fiber obtained by melt spinning. Kajita teaches a lower melting polypropylene based copolymer as the sheath and a higher melting isotactic polypropylene as the core. Kajita teaches the conjugate fibers are crimped and cut into staple fibers (ABST). Kajita teaches a conjugate fiber with two different melting points. Kajita teaches the nonwoven fabric is made by welding the fiber via an exhaust air

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through process [0023]. The term welding is equated with heat fusible. Kajita teaches a heat fusible fiber.

Kajita teaches the fiber is produced comprising the steps of obtaining undrawn yarns by melt spinning and crimping the undrawn yarns and cutting the crimped undrawn yarns into staple fibers. Kajita teaches a melt spinning process can be high speed or low speed but also teaches trouble with thread breakage occurs if the spinning speed is high and it is necessary to make melt spinning speed a low speed. Kajita differs and does not teach the range of high or low speed and claims 1 and 7 do limit the range to a specific speed. The speed of the melt spinning is a process limitation and it should be noted that even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though a different process made the prior product. In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. In re Marosi, 218 USPQ 289,292 (Fed. Cir. 1983).

Kajita teaches substantially the same process as claimed.

Kajita teaches the cut staple fibers have a length of 51 mm which is in the claimed range of 30-70 mm.

Kajita teaches a sheath and a core and a sheath would be present on at least part of the surface of the fiber.

**Kajita differs from the current application and does not teach the property of orientation index of the sheath and core polymers.** Orientation index is defined by Applicant to be the ratio of the drawn fiber birefringence over the intrinsic birefringence. The birefringence of a drawn fiber is dependent on the melt spin processing parameters, evidenced by the reference "Polypropylene, An A-Z Reference". Birefringence is dependent on the spinning take up velocity as found on page 431 which shows birefringence as a function of take-up velocity of a melt spun filaments. As the reference shows, as the spinning speed is increased, so does the birefringence. As the reference teaches, optimizing the spinning take up velocity would change the orientation index of the resultant fiber. Therefore birefringence and the orientation index is a result-effective variable of the spinning process. As Applicant teaches an undrawn fiber, the claimed orientation index would result from this process or could be optimized to obtain the desired property. While the intrinsic birefringence of the resins employed in the invention could be compared to prior art resins, the property of orientation depends on the process parameters and Examiner will presume that the orientation index as claimed would be inherently result from employing the resins and process of Kajita.

**Kajita differs and does not teach the fiber has the property of negative heat shrinkage.** Kajita teaches the fiber for a nonwoven which has bulkiness by thermofusing which implies the fiber expands with heat to produce a bulky and lofty web.

Kajita teaches and measures the fiber shrinkage by method JIS L 1015 [0039]. The shrinkage is less than 1.5% and 0.5% for comparative example 1. Kajita is

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teaching very low shrinkage measured by JIS L 1015. Applicant claims a negative heat shrinkage which is measured with a thermomechanical analyzer TMA-50 (page 5, lines 21-23). As the property is measured by a different test method, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02

As claim 7 includes the additional limitations of specific volume, strength per basis weight and bulk softness per unit thickness. **Kajita differs and does not teach the properties of specific volume, strength per basis weight and bulk softness per unit thickness.**

Kajita teaches substantially the same process and materials as claimed and therefore it is presumed that the claimed properties are inherent to Kajita or it would have been obvious to optimize the materials and process to obtain the claimed properties. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02

As to claim 4, Kajita teaches a sheath-core configuration where the first resin or core resin has the higher melting point and the second resin or lower melting point resin is the sheath.



As to claim 6 and 8, Kajita teaches the fibers go through a carding machine [0033].

As to claim 11, Kajita teaches a process where the conjugate fibers are melt spun, mechanically crimped [0032]-[0033] but no heating or drawing is performed [0026].

As to claims 12 and 13, Kajita teaches the property of heat shrinkage of 0.6% and 0.5% as measured by JIS L 1015. Applicant teaches the property of heat shrinkage measured by thermomechanical analyzer TMA-50. Applicant's range of heat shrinkage claimed is -0.33 to -20%. -0.33% is substantially the same as 0.5% however the methods of measurement are different. Therefore it is reasonable to presume that the property of low heat shrinkage is inherent or obvious over the structure as claimed. When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention the examiner has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112- 2112.02

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**1. Claim 5 and 10 rejected under 35 U.S.C. 103(a) as being unpatentable over Kajita (JP-2003-119625) in view of J. Karger-Kocsis, Institute for Composite Materials "Polypropylene An A-Z reference" and in further view of Horiuchi et al (US 5,800,230).**

As to claim 5, Kajita differs and does not teach the second resin component, or sheath, comprises high-density polyethylene.

Horiuchi teaches a bulky nonwoven fabric and a method of manufacturing the filament nonwoven fabric which is made of conjugated filaments (ABST).

Horiuchi teaches a process of making a conjugate filament including the steps of spinning the conjugated filaments by a spun bond method, blowing the webs by a high-speed flow against a scavenging device and removing the blown high-speed flow from the device, carrying out a preliminary bulkiness treatment; adding crimps and bulkiness (col. 2, lines 35-45). The bulkiness treatment is a heat treatment that is a hot air through treatment at a temperature between the melting point of the low melting point polymer and that of the high melting point polymer (col. 2, lines 60-64).

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Horiuchi teaches high speed melt spinning followed by a heat treatment which produces a crimped fiber. Horiuchi teaches spinning the filaments and quenching in a high-speed flux sucking device. Horiuchi teaches the spun fibers are drawn by the high-speed flux drawing device.

In example 1, Horiuchi teaches a low melting point polymer of high density polyethylene and a high melting point polymer of polypropylene spun through a conjugated spinning device, where the temperature was 260°C for the sheath section and 320°C for the core section. Horiuchi teaches a spun filament was pulled by high-speed flux type sucking and removal device at 3000m/min and was blown against the net conveyor along with air flux. The blown air flux was sucked and removed by the high-speed flux sucking and removal device at the bottom of the net conveyor. The blown air flux is called a preliminary bulking treatment and the air can be at a higher temperature. Then the floating web heat through air treatment was carried out at 144°C. As the current application teaches high speed melt spun filaments have take up speed of 2000m/min, Horiuchi teaches a speed that is equated with high speed of claim 1.

Horiuchi teaches a first resin and a second resin wherein one has a higher melting point and the other has a lower melting point and the difference in melting points is at least 15°C (ABST). As to claim 5, Horiuchi teaches the first resin comprises polypropylene and a second resin of high-density polyethylene (col. 8, lines 41-45).

Horiuchi presents a finding that one of ordinary skill in the art could have substituted a high density polyethylene as the sheath motivated to produce a bulky fiber and a bulky nonwoven.

As to claim 10, Kajita differs and does not teach the spinning speed. Horiuchi teaches a take up speed of 3000m/min in example 1. Horiuchi presents a finding that one of ordinary skill in the art could have employed the technique of high speed melt spinning to produce a heat fusible conjugate fiber motivated to produce a bulky fiber and a bulky nonwoven.

### ***Response to Arguments***

2. Applicant's amendments and arguments filed 7/28/2010 have been fully considered but they are not persuasive. Applicant argues that the claimed fiber has a negative heat shrinkage which results in a fiber that increases in length upon heating. Applicant argues that there is a significant difference between Kajita is the fibers behavior against heat. Applicant also states that an orientation index of the first resin and the second resin component of the fibers are important in order to increase the fiber length upon heating.

In response to the argument over whether the fibers of Kajita respond to heat in the same manner as the claimed invention, the measure of heat shrinkage of Kajita versus Applicant are different. Evidence to show that the two different measurements are comparable could be sufficient to overcome the rejection over Kajita. As Kajita is also teaching a low heat shrinkage fiber, and low being 0.5% as measured by JIS L

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1015, it is reasonable to presume that a different measurement technique would result in a -0.5% result which would be in Applicant's claimed range. Both Kajita and Applicant's fibers have substantially zero heat shrinkage.

In response to the argument that orientation index is important in order resulting in the negative heat shrinkage property, the office action has explained that orientation index is a result-effective variable of the spinning speed. It is known in the art to optimize the orientation index by changing the spinning speed and provided the spinning speeds of the prior art and the claimed invention are the same, the orientation indexes would inherently be the same. Kajita teaches both high and low spinning speeds can be used and specifically states that the examples employ a spinning speed of 900 m/min. The spinning speed of Example 5 is 1360 m/min and claim 10 requires a 2000 m/min spinning speed or greater. As claim 1 does not recite a spinning speed that is different from Kajita, the rejection is maintained and it is reasonable to presume that the orientation index is inherent to Kajita and the resulting heat shrinkage is also inherent in Kajita.

Applicant argues that the negative heat shrinkage is advantageous because it provide increased bulkiness as well as fabric that has improved bonding because the fiber size does not change and move while bonded. These properties would also be inherent to Kajita as Kajita teaches low heat shrinkage.

Applicant's arguments that Kajita's fiber shrink and Applicant's have claimed negative heat shrinkage are not persuasive. As noted above, both Kajita and Applicant teach a fiber with heat shrinkage of about zero. Further, Kajita and Applicant teach

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different methods of measurement and therefore Examiner can not compare the different results.

Applicant cites the numerous steps of the process of Kajita in order to conclude that Kajita's fibers have a low shrinkage and not an increase in fiber length. Applicant equates increase in fiber length with negative heat shrinkage claimed. Again, the terms are relative as both Kajita and Applicant teach fiber heat shrinkage of about zero. In the absence of comparative data to show that the method of measurement for Kajita is the same or different than as claimed, it is reasonable to presume that Kajita inherently possesses the claimed property.

Applicant argues that Kajita does not have inherently have the same properties as claimed as Kajita teaches a different process than Applicant. Applicant's arguments are not commensurate with the scope of the claims. Applicant argues that Kajita teaches a spinning speed of 900 m/min while Applicant describes high speed spinning is 2000 m/min or higher in specification. While Examiner can look to the specification for guidance, Examiner can not import limitations that are not in the claims. In addition, Applicant has pointed to support for the claimed 16% orientation index in Example 5. Example 5 has a spinning speed of 1360 m/min which is not considered high speed by Applicant's own specification. Therefore Applicant's claimed high speed melt spinning is equated with Kajita's high speed melt spinning.

Applicant argues that Kajita neither discloses or suggest the technical idea of making the heat shrinkage of fibers negative. As noted above, Applicant's specification indicates that negative heat shrinkage is -0.33% in example 5 (page 16) and -0.01% in

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example 2 (page 13). Both of Applicants disclosed results are nearly zero. Kajita's heat shrinkage is 0.5% which is also nearly zero. Kajita is directed to a fiber and fabric that has minimal heat shrinkage and the heat shrinkage rate is provided that produces excellent weld or bonding nature [0013] and [0023]. Kajita is teaching a low heat shrinkage fiber. Further, discovery of an inherent feature or property from an existing material or structure need not be recognized at the time of the invention.

In summary, Examiner recognizes that Applicant appears to claiming a fiber with negative heat shrinkage where the negative heat shrinkage is a result of optimizing the orientation index of the two polymer components. The orientation index is affected by the spinning speed. However, Applicant's claims do not distinguish the claimed structure, materials or process from Kajita.

3. Applicant argues the rejection of claims 5 and 10 over Kajita and Horiuchi stating that the secondary reference fails to disclose or suggest the claimed features or the advantages achieved by the instant invention. Horiuchi is relied upon for teaching a high density polyethylene second resin component is known in the art to produce a bulky, crimped fiber. Further Horiuchi teaches a process with a spinning speed of 2000 m/min. One of ordinary skill in the art would look to Horiuchi motivated to produce a bulky, crimped fiber. Applicant argues that the claimed invention exhibits unexpected, advantageous properties. The burden of proof is on the Applicant to present evidence of the unexpected results. Applicant's specification teaches that a fiber with negative heat shrinkage is produced by a high speed melt spinning process. The high speed melt spinning process results in a specific orientation index that results in the property of

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negative heat shrinkage. As shown in Table 3 of Applicant's specification and presented in Applicant's arguments, the increase in spinning speed results in lower orientation index and negative heat shrinkage. However, the working examples that do have a negative heat shrinkage, the heat shrinkage is about zero and therefore it is reasonable to presume that it is the same as Kajita's heat shrinkage. Applicants also teach the heat shrinkage can be about -20% and -10%. A negative heat shrinkage in this range is substantially different from what is taught in Kajita. However a showing of comparative test result methods (JIS L 1015 versus the thermomechanical analyzer TMA-50) would be required to show this is in fact the case. In addition, evidence showing that Applicant has unexpectedly found that optimizing the spinning speed combined with the first and second resin polymers materials and resulting orientation indexes has resulted in negative heat shrinkage could be sufficient to overcome the rejection over Kajita, Anton and Horiuchi.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER STEELE whose telephone number is (571)272-7115. The examiner can normally be reached on Office Hours Mon-Fri 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on (571) 272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S./

/Angela Ortiz/

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Examiner, Art Unit 1798

Supervisory Patent Examiner, Art  
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10/7/2010